

Claims

1. A dual journaling storing method for storing data in a storage medium, characterized in that data are stored from start and end locations of the storage medium toward a central portion.

2. The dual journaling storing method according to claim 1, wherein when two types of the data whose kind and characteristic are different are stored in the storage medium, the two types of data are separately stored as a front journaling and a rear journaling, respectively.

3. The dual journaling storing method according to claim 2, wherein when the front journaling and the rear journaling meet each other at a central location, data is again stored from the start location and the end location, respectively.

4. The dual journaling storing method according to claim 2, wherein in case a head of the front journaling and a head of the rear journaling meet each other to form a central location for the first time and then the central location is formed for the second time or more, the central location moves toward the other party's journaling when the head of the front journaling or the head of the rear journaling arrives again at the central location.

5. A dual journaling storing method for inserting data into a storage medium, comprising the steps of:

when the insertion of the data into the storage medium is requested, performing a garbage collection if a storage space is insufficient, thereby moving the data and carrying out an erase operation; and

checking whether or not there is a sufficient space in the storage medium after the data storage is completed,

thereby securing a storage space for a next inserted data.

6. A method for storing data in a storage medium, comprising the steps of:

5 dividing the data into a first data and a second data; and

10 storing one of the first data and the second data from a start location of the storage medium, and storing the other from an end location of the storage medium toward the start location.

7. The method according to claim 6, further comprising the step of:

15 in case the first data and the second data are stored and meet each other at a central location, storing corresponding data again from the start location and the end location, respectively.

20 8. The method according to claim 7, further comprising the step of:

when the central location is formed for the first time and then formed for a subsequent time, moving the central location in a progressing direction of data arriving first at the central location.

25 9. A flash memory device comprising:

a processor for generating a read/write command for reading/writing data from/to a specific address;

a flash memory for providing a data storage space; and

30 a memory controller for controlling the data to be stored in the flash memory from start and locations of the data storage space toward a central portion.

35 10. A multiple-partitioned flash memory device comprising:

a multiple-partitioned memory;

a plurality of partitions provided by a multiple partition of the memory, in which data being stored are independently read, written or erased;

5 a charge pump for providing a plurality of voltage levels necessary to read, write and erase the data; and

a plurality of first sense amplifiers configured for a read operation, the read operation being simultaneously executable for the respective partitions;

10 a plurality of second sense amplifiers including at least one sense amplifier configured for erase and write operations, the erase and write operations being simultaneously executable for the respective partitions, wherein the data are stored in the respective partitions from start and end locations of storage spaces of the respective partitions toward respective central portions.

11. The multiple-partitioned flash memory device according to claim 10, wherein in case the data whose characteristic are different are stored in the storage medium, the data are separately stored as a front journaling and a rear journaling.

12. The multiple-partitioned flash memory device according to claim 11, wherein in case the front journaling and the rear journaling meet each other at a central location, the data is again stored from the start location.

13. The multiple-partitioned flash memory device according to claim 11, wherein in case a head of the front journaling and a head of the rear journaling meet each other to form a central location for the first time and then the central location is formed for the second time or more, the central location moves toward the other party's journaling when the head of the front journaling or the head of the rear journaling arrives again at the central location.

14. The multiple-partitioned flash memory device according to claim 10, wherein the data being stored in the respective partitions are divided into a meta data and a file data, the file data being stored from the start locations of the respective partitions, the meta data being stored from the end locations of the respective partitions toward the start locations.

15. A mobile terminal adopting a multiple-partitioned memory, comprising:

a bus;
a processor connected to the bus;
a flash memory connected to the bus and accessible by the processor, the flash memory being sectioned into a plurality of partitions, wherein data being stored according to the respective partitions are independently read, written or erased;

20. a plurality of first sense amplifiers configured for a first operation, the first operation being simultaneously executable for the respective partitions;

25. a plurality of second sense amplifiers including at least one sense amplifier configured for a second operation, the second operation being simultaneously executable for the respective partitions, wherein the data are stored in the respective partitions from start and end locations of storage spaces of the respective partitions toward respective central portions.

16. The mobile terminal according to claim 15, wherein in case the data whose kind and characteristic are different are stored in the storage medium, the data are separately stored as a front journaling and a rear journaling.

35 17. The mobile terminal according to claim 16, wherein in case the front journaling and the rear journaling

meet each other at a central location, the data is again stored from the start location.

18. The mobile terminal according to claim 16,
5 wherein in case a head of the front journaling and a head of
the rear journaling meet each other to form a central
location for the first time and then the central location is
formed for a subsequent time, the central location moves
toward the other party's journaling when the head of the
10 front journaling or the head of the rear journaling arrives
again at the subsequent central location.

19. The mobile terminal according to claim 15,
wherein the data being stored in the respective partitions
15 are divided into a meta data and a file data, the file data
being stored from the start locations of the respective
partitions, the meta data being stored from the end locations
of the respective partitions toward the start locations.

20. A dual journaling storing method for storing data
in a memory sectioned into multiple partitions, data being
independently read, written or erased according to the
respective partitions, characterized in that data are stored
from start and end locations of storage spaces of the
25 respective partitions toward a central portion.

21. The dual journaling storing method according to
claim 20, wherein in case the data whose characteristic are
30 different are stored in a storage medium, the data are
separately stored as a front journaling and a rear
journaling.

22. The dual journaling storing method according to
claim 21, wherein in case the front journaling and the rear
35 journaling meet each other at a central location, the data is
again stored from the start location and the end location,

respectively.

23. The dual journaling storing method according to claim 21, wherein in case a head of the front journaling and a head of the rear journaling meet each other to form a central location for the first time and then the central location is formed for the second time or more, the central location moves toward the other party's journaling when the head of the front journaling or the head of the rear journaling arrives again at the central location.

24. The dual journaling storing method according to claim 21, wherein the data being stored in the respective partitions are divided into a meta data and a file data, the file data being stored from the start locations of the respective partitions, the meta data being stored from the end locations of the respective partitions toward the start locations.

25. A dual journaling storing method for storing data in a memory sectioned into multiple partitions in case the data are inserted into the respective partitions of a flash memory, wherein the data are independently read, written or erased according to the respective partitions, the dual journaling storing method comprising the steps of:

when the insertion of the data into the respective partitions is requested, a storage medium performing a garbage collection if a storage space is insufficient, thereby moving the data and carrying out an erase operation; and

checking whether there is a sufficient space in the storage medium after the data storage is completed, thereby securing a storage space for a next inserted data.

35 26. A mobile terminal comprising:
a bus;

- a processor connected to the bus;
- a memory connected to the bus, data being read/written from/to the memory; and
- 5 a memory controller for controlling the data to be written from start and end locations of a storage space toward a central portion.